Docket No. 1670.1020

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Koji Shigemura

Application No. 10/717,571 Group Art Unit: 1792

Confirmation No. 9396

Filed: November 21, 2003 Examiner: James Lin

For: DEPOSITION MASK FRAME ASSEMBLY, METHOD OF FABRICATING THE SAME, AND METHOD OF FABRICATING ORGANIC ELECTROLUMINESCENT DEVICE USING THE DEPOSITION MASK FRAME ASSEMBLY

REPLY BRIEF

Mail Stop Appeal Brief—Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief is being filed under 37 CFR 41.41 in response to the Examiner's Answer mailed December 19, 2007, and having a period for response set to expire on February 19, 2008, under 37 CFR 41.41(a)(1), which replaced the Examiner's Answer of November 23, 2007.

Submitted herewith is a Submission of English Translation of Priority Document submitting an English translation of Japanese Patent Application No. 2002-339616 filed on November 22, 2002, the Japanese priority application of the present application, and a Certification of Translation containing a statement that the English translation is accurate to perfect the applicant's claim for foreign priority under 35 USC 119(a)-(d). A certified copy of the Japanese priority application was filed on November 21, 2003.

The sections of this Reply Brief have the same numbers as the corresponding sections of the Appeal Brief of August 27, 2007, but only those sections that have changed are included in this Reply Brief, except for the Status of Claims section, which has not changed, but is nevertheless included as required by 37 CFR 1208(I).

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III. STATUS OF CLAIMS (NO CHANGE)

Claims 1-5, 7-19, 21, and 22 are pending, with claims 1, 8, and 14 being independent.

Claims 6 and 20 have been canceled.

Claims 1-5 and 7 are withdrawn from consideration as being directed to non-elected Invention I.

Claims 8-13 are withdrawn from consideration as being directed to non-elected Invention II.

Claims 14-19, 21, and 22 are under consideration as being directed to elected Invention III.

Claims 14-19, 21, and 22 have been rejected.

Claims 14-19, 21, and 22 are on appeal.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (UPDATED)

1. Whether claims 14-19, 21, and 22 comply with the written description requirement of 35 USC 112, first paragraph.

2. Whether 14-17 and 21 are unpatentable under 35 USC 103(a) over Utsugi et al. (Utsugi) (U.S. Patent Application Publication No. 2002/0150674) in view of Ito et al. (Ito) (U.S. Patent No. 5,652,067) and Martin (U.S. Patent No. 4,676,193).

3. Whether claim 15 is unpatentable under 35 USC 103(a) over Utsugi in view of Ito and Martin as applied to claim 14, and further in view of Yamada et al. (Yamada) (U.S. Patent Application Publication No. 2001/0019807).

4. Whether claims 18 and 19 are unpatentable under 35 USC 103(a) over Utsugi in view of Ito and Martin as applied to claim 17, and further in view of Kitazume (U.S. Patent Application Publication No. 2002/0025406).

5. Whether claim 22 is unpatentable under 35 USC 103(a) over Utsugi in view of Ito and Martin as applied to claim 14, and further in view of Fujimori et al. (Fujimori) (U.S. Patent Application Publication No. 2002/0102754).

6. Whether claims 14, 15, 17, 18, and 21 are unpatentable under 35 USC 103(a) over Tsuchiya et al. (Tsuchiya) (WO 03/019988 and English translation thereof) in view of Ito (new ground of rejection in Examiner's Answer).

7. Whether claim 15 is unpatentable under 35 USC 103(a) over Tsuchiya in view of Ito as applied to claim 14, and further in view of Yamada (new ground of rejection in Examiner's Answer).

8. Whether claims 16 and 22 are unpatentable under 35 USC 103(a) over Tsuchiya in view of Ito as applied to claim 14, and further in view of Martin (new ground of rejection in Examiner's Answer).

9. Whether claim 19 is unpatentable under 35 USC 103(a) over Tsuchiya in view of Ito as applied to claim 18, and further in view of Kitazume (new ground of rejection in Examiner's Answer).

VII. ARGUMENT (ADDITIONAL)

This section contains additional arguments responding to the new arguments presented by the Examiner on pages 11-19 of the Examiner's Answer of December 19, 2007. These additional arguments supplement the arguments in Section VII—Argument on pages 8-31 of the Appeal Brief of August 27, 2007.

This section also includes additional arguments responding to the new grounds of rejection presented by the Examiner on pages 8-11 of the Examiner's Answer of December 19, 2007.

The arguments in Section VII—Argument on pages 8-31 of the Appeal Brief of August 27, 2007, contain arguments that refer to various sections of the Manual of Patent Examining Procedure (MPEP). Some of these MPEP sections were deleted or revised in the September 2007 revision of the MPEP, which was released after the Appeal Brief of August 27, 2007, was filed, primarily in view of the decision of the Supreme Court in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. ___, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). Accordingly, this section contains additional arguments referring to new or revised MPEP sections where necessary.

Claim Rejections Under 35 USC 112

Rejection 1—Claims 14-19, 21, and 22

Claims 14-19 and 21

On page 11 of the Examiner's Answer of December 19, 2007, the Examiner states "[r]egarding the rejection of claim 14 and the claims depending therefrom, the rejection has been withdrawn, as indicated in the Advisory Action filed 6/1/2007."

The claims that depend from claims 14 are claims 15-19, 21, and 22. However, as can be seen from the Examiner's comments on pages 11 and 12 of the Examiner's Answer of December 19, 2007, the Examiner has not withdrawn the rejection of claim 22 with respect to the feature "wherein the flat frame and the flat cover mask are the only elements that touch the flat mask" recited in claim 22.

Thus, the Examiner has withdrawn the rejection of claims 14-19 and 21 under 35 USC 112, first paragraph, but has maintained the rejection of claim 22 under 35 USC 112, first paragraph.

Claim 22

On page 12 of the Examiner's Answer of December 19, 2007, the Examiner states as follows with respect to claim 22, which was added in the Amendment of February 1, 2007, and recites the feature "wherein the flat frame and the flat cover mask are the only elements that touch the flat mask":

> [T]he requirement that "the flat frame and the flat cover mask are the only elements that touch the flat mask", as required in claim 22, is not necessarily limited to laser welding. For example, a clamp can hold the frame assembly together without touching the flat mask. The disclosure of a single species (i.e., laser welding) does not reasonably convey to one skilled in the art that Appellant had possession of an entire genus at the time the present application was filed because a genus contains multiple species. For the Appellant to have had possession of the invention of claim 22, the specification at the very least would have had to *include* the embodiment of clamping the frame assembly with a clamp without touching the flat mask and to *exclude* the use of traditional welding methods wherein a welding material (i.e., a material functioning as a glue) contacts the pieces to be held together (i.e., including the flat mask), neither of which is disclosed in the present specification. In fact, the present specification actually *includes* traditional welding techniques (see, e.g., claim 17) in which a welding material would contact the mask. Therefore, Appellant has not conveyed with reasonable clarity to those skilled in the art that he or she was in possession of claim 22 at the time the present specification was filed, and thus claim 22 does not comply with the written description requirement of 35 USC 112, 1st paragraph.

However, the Examiner has not cited any statute, rule, procedure, or decision in support of his position, which makes it impossible for the applicant to determine what the Examiner considers to be the legal basis for his position.

With respect to the Examiner's statement that "[i]n fact, the present specification actually *includes* traditional welding techniques (see, e.g., claim 17) in which a welding material would contact the mask," it is noted that claim 17 actually recites "[t]he method of claim 14, wherein the

flat mask, the flat frame, and the flat cover mask are held together by welds." The Examiner has not explained why he considers claim 17 to recite a "traditional welding technique[ ] . . . in which a welding material would contact the mask."

With respect to the Examiner's statement that "[f]or the Appellant to have had possession of the invention of claim 22, the specification at the very least would have had to *include* the embodiment of clamping the frame assembly with a clamp without touching the flat mask and to *exclude* the use of traditional welding methods wherein a welding material (i.e., a material functioning as a glue) contacts the pieces to be held together (i.e., including the flat mask), neither of which is disclosed in the present specification," it appears that the Examiner is stating that the present application does not disclose welding the flat mask, the flat frame, and the flat cover mask together using a welding method other than "[a] traditional welding method[ ] wherein a welding material (i.e., a material functioning as a glue) contacts the pieces to be held together (i.e., including the flat mask)."

However, it is submitted that the present application as originally filed does in fact disclose methods other than "[a] traditional welding method[ ] wherein a welding material (i.e., a material functioning as a glue) contacts the pieces to be held together," specifically resistance welding, dot welding, laser welding, and laser dot welding. See, for example, paragraphs [0032], [0037], [0045], and [0052] of the specification as originally filed, and original claims 5 and 18.

It is submitted that one of ordinary skill in the art, at the time the present application was filed, would have known that there are two basic types of welding, a first type in which a filler material is used to join two pieces of metal together, which is presumably the "traditional welding method[ ] wherein a welding material (i.e., a material functioning as a glue) contacts the pieces to be held together" referred to by the Examiner, and a second type in which two pieces of metal are joined together without using a filler material.

It is submitted that one of ordinary skill in the art, at the time the present application was filed, would have known that examples of the second type of welding in which two pieces of metal are joined together without using a filler material include, for example, resistance welding and energy beam welding; that examples of resistance welding include, for example, flash welding, high-frequency resistance welding, percussion welding, projection welding, resistance seam welding, resistance spot (or dot) welding, and upset welding; that examples of energy beam welding include, for example, laser beam welding and electron beam welding; and that

examples of laser beam welding include, for example, laser seam welding and laser spot (or dot) welding. As discussed above, the present application as originally filed discloses resistance welding, dot welding, laser welding, and laser dot welding. See, for example, paragraphs [0032], [0037], [0045], and [0052] of the specification as originally filed, and original claims 5 and 18.

However, it is submitted that whether or not the present application as originally filed discloses welding the flat mask, the flat frame, and the flat cover mask together using a welding method other than "[a] traditional welding method[ ] wherein a welding material (i.e., a material functioning as a glue) contacts the pieces to be held together (i.e., including the flat mask)" is irrelevant to the rejection of claim 22 under 35 USC 112, first paragraph, as failing to comply with the written description requirement because it appears that the rejection of claim 22 with respect to the feature "wherein the flat frame and the flat cover mask are the only elements that touch the flat mask" recited in claim 22 is based on an incorrect interpretation of claim 22 by the Examiner.

As indicated above, in explaining the rejection, the Examiner states that "the requirement that 'the flat frame and the flat cover mask are the only elements that touch the flat mask', as required in claim 22, is not necessarily limited to laser welding," and that "[f]or example, a clamp can hold the frame assembly together without touching the flat mask." Thus, it appears that the Examiner has interpreted claim 22 as if it recited "wherein the deposition mask frame assembly is held together by a method that enables the flat frame and the flat cover mask to be the only elements that touch the flat mask," or something to that effect. However, claim 22 actually recites that "the flat frame and the flat cover mask are the only elements that touch the flat mask," such that the Examiner's apparent interpretation of claim 22 is incorrect.

Pursuant to MPEP 2163(I), an applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. *Lockwood v. American Airlines, Inc.,* 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997). Possession may be shown in a variety of ways including description of an actual reduction to practice, or by showing that the invention was "ready for patenting" such as by the disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. See, e.g., *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 68, 119

S.Ct. 304, 312, 48 USPQ2d 1641, 1647 (1998); *Eli Lilly*, 119 F.3d at 1568, 43 USPQ2d at 1406; *Amgen, Inc. v. Chugai Pharmaceutical*, 927 F.2d 1200, 1206, 18 USPQ2d 1016, 1021 (Fed. Cir. 1991) (one must define a compound by "whatever characteristics sufficiently distinguish it"). "Compliance with the written description requirement is essentially a fact-based inquiry that will 'necessarily vary depending on the nature of the invention claimed.' " *Enzo Biochem*, 323 F.3d at 963, 63 USPQ2d at 1613.

Pursuant to MPEP 2163(II)(A)(3)(a), possession may also be shown by a clear depiction of the invention in detailed drawings or in structural chemical formulas which permit a person skilled in the art to clearly recognize that applicant had possession of the claimed invention. Also, an applicant may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole. See, e.g., *Vas-Cath*, 935 F.2d at 1565, 19 USPQ2d at 1118 ("drawings alone may provide a 'written description' of an invention as required by Sec. 112"); *In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962) (the drawings of applicant's specification provided sufficient written descriptive support for the claim limitation at issue); *Autogiro Co. of America v. United States*, 384 F.2d 391, 398, 155 USPQ 697, 703 (Ct. Cl. 1967) ("In those instances where a visual representation can flesh out words, drawings may be used in the same manner and with the same limitations as the specification.").

Here, it is submitted that at least FIGS. 3 and 6A of the present application as originally filed (wherein the welding dots 140 in FIG. 3 may be formed, for example, by dot welding, resistance dot welding, or laser dot welding as described, for example, in paragraphs [0032], [0037], [0045], and [0052] of the specification as originally filed and original claims 5 and 18) show the feature "wherein the flat frame and the flat cover mask are the only elements that touch the flat mask" recited in claim 22, such that the application as originally filed does in fact reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, has possession of the claimed invention. Accordingly, it is submitted that claim 22 does in fact comply with the written description requirement of 35 USC 112, first paragraph.

For at least the foregoing reasons and the reasons discussed on pages 8-12 of the Appeal Brief of August 27, 2007, it is respectfully requested that the rejection of claim 22 under 35 USC 112, first paragraph, as failing to comply with the written description requirement be reversed.

Claim Rejections Under 35 USC 103

Some of the arguments on pages 12-31 of the Appeal Brief of August 27, 2007, rely on the following portion of MPEP 2143 that appears on page 2100-126 of the August 2006 revision of the MPEP (emphasis by underlining added):

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.
>
> The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

However, this section has been deleted in the September 2007 revision of the MPEP, presumably in response to the decision of the Supreme Court in *KSR v. Teleflex* cited above in which the Court held that the Court of Appeals for the Federal Circuit had applied the "teaching, suggestion, or motivation" (TSM) test referred to in this section in a narrow, rigid manner that limited the obviousness inquiry. However, the Court also noted that the idea underlying the TSM test is not necessarily inconsistent with the analysis to determine obviousness under 35 USC 103 that is required under *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966).

Pursuant to the September 2007 revision of MPEP 2142, the Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness; if the Examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness; and the key to supporting any rejection under 35 USC 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Examiner has applied the TSM test in an attempt to clearly articulate reasons why the claimed invention would have been obvious, and the applicant has responded with arguments pointing out why the Examiner has not properly applied the TSM test.

In any event, regardless of the terminology employed by the Examiner and the applicant, for the reasons discussed on pages 11-26 below and on pages 12-31 of the Appeal Brief of

August 27, 2007, it is submitted the Examiner has not clearly articulated reasons why Utsugi, Ito, Martin, Yamada, Kitazume, and Fujimori relied on by the Examiner disclose or suggest various features of claims 14-19, 21, and 22, such that the Examiner has not established a *prima facie* case of obviousness with respect to these claims pursuant to MPEP 2142.

Rejection 2—Claims 14-17 and 21

Claim 14

The Examiner states as follows on page 14 of the Examiner's Answer of December 19, 2007:

> In the teaching of the embodiment of Fig. 7, Martin explicitly teaches of importance is that a radial tension can be applied in a number of ways to the metal foil [40']. (col. 9, line 65-col. 10, line 2). Thus, Martin suggests that other methods of applying radial tension can be used so long as a tension is applied to the metal foil [40'].

Column 9, line 65, through column 10, line 2, of Martin referred to by the Examiner reads as follows:

> In the alternative, it is possible to mechanically clamp and stretch the metal foil 40' by use of a mechanical member which is illustrated in FIG. 7. This will be discussed in greater detail with respect to FIG. 7. Of importance is, that a radial tension can be applied in a number of ways to the substantially metal foil 40'.

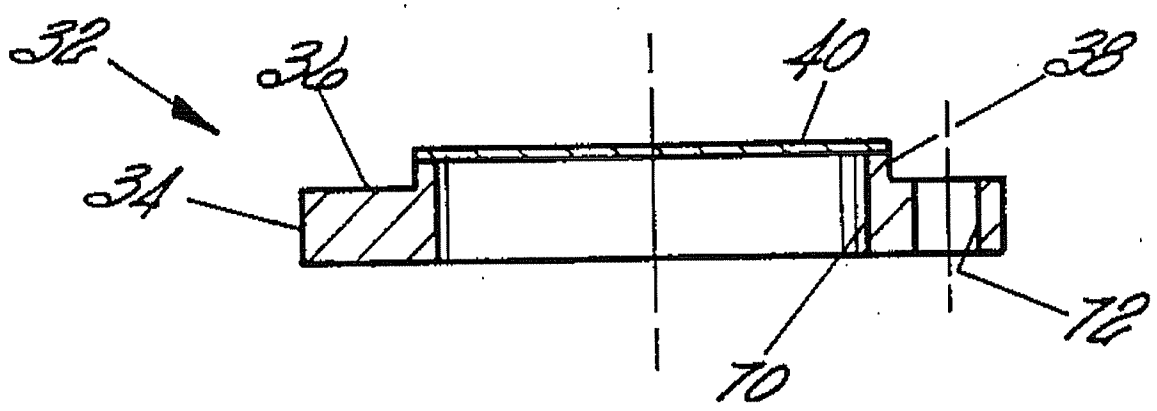
Although this passage of Martin does state that "of importance, is that a radial tension can be applied in a number of ways to the substantially metal foil 40' " as pointed out by the Examiner, the fact remains that Martin only specifically discloses two ways of doing so. The first way of applying a radial tension to the metal foil 40' is stretching the metal foil 40' by applying a stretching force to the edges of the metal foil 40' before the metal foil 40' is welded to the raised ridge 38 of the mask supporting frame 34 as shown in FIGS. 1-6 of Martin and described in column 9, lines 61-64, and column 10, lines 27-32, of Martin. The second way of applying a radial tension to the metal foil 40' is stretching the metal foil 40' by the clamping action of the clamping member 88 having the raised boss member 98 and the mask supporting frame 34 having the raised ridge 38 as shown in FIG. 7 of Martin and described in column 10, lines 62-66, and column 11, lines 5-13, of Martin. Since Martin makes the statement "[o]f importance is, that

a radial tension can be applied in a number of ways to the substantially metal foil 40' " as a preface to the detailed discussion of the alternative clamping embodiment in FIG. 7 of Martin, it appears that the "number of ways" referred to by Martin is in fact only two ways—the first way shown in the welding embodiment in FIGS. 1-6, and the second way shown in the clamping embodiment in FIG. 7.

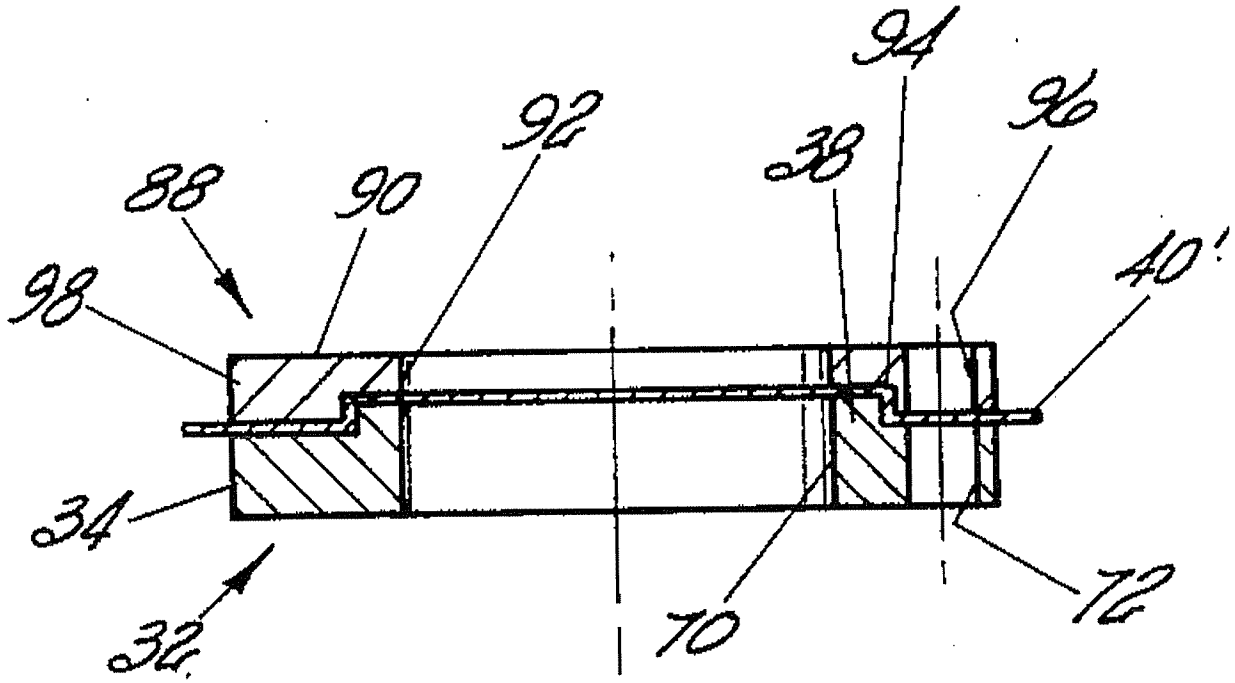
The Examiner continues as follows on page 14 of the Examiner's Answer of December 19, 2007:

> In the case of removing the raised boss member [98] and the raised ridge [38] such that the clamping function would be lost, the weight of the clamping member [88], even without adding the modification of welding, would necessarily provide at least some downward force on the metal foil [40'] such that at least some radial tension would be applied to the metal foil [40']. Thus, the basic principle of Martin is maintained in the removal of such elements.

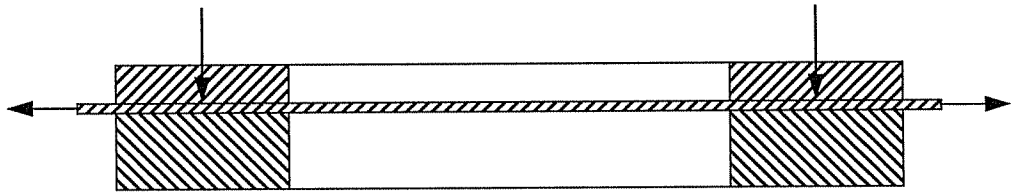
Here is FIG. 5 of Martin showing the completed form of Martin's welding embodiment shown in FIGS. 1-6 of Martin:



Here is FIG. 7 of Martin showing Martin's clamping embodiment:



Here is a diagram of the modification of FIG. 7 of Martin proposed by the Examiner:



In this diagram, the raised ridge 38 has been eliminated from the mask supporting frame 32 as proposed by the Examiner, and the raised boss member 98 has been eliminated from the clamping member 88 as proposed by the Examiner. The apertures 72 and 96 have also been eliminated in the diagram because they presumably would no longer be required since the Examiner has proposed that the mask 40', the modified mask supporting frame 38, and the modified clamping member 88 be welded together. Thus, the apertures 72 and 96 would no longer be needed to accept the registration members 60 shown in FIG. 1 of Martin to hold the metal foil 40', the modified mask supporting frame 38, and the modified clamping member 88 together, while also registering the mask frame assembly. It is noted that the Examiner has

proposed to eliminate the registration members 60, which include the registration pins 62 and the adjusting means 64, in the explanation of the rejection of claim 22.

The downward arrows in the above diagram showing the modification of FIG. 7 of Martin proposed by the Examiner represent the downward force on the metal foil 40' due to the weight of the modified clamping member 88 referred to by the Examiner, and the left and right arrows represent the radial tension in the metal foil 40' referred to by the Examiner. However, it is not seen how the downward force due to the weight of the modified clamping member 88 could produce the radial tension because the downward force is perpendicular to the radial tension. Accordingly, it is submitted that the position taken by the Examiner that "the weight of the clamping member [88], even without adding the modification of welding, would necessarily provide at least some downward force on the metal foil [40'] such that at least some radial tension would be applied to the metal foil [40']" is contrary to the laws of physics. Nor is it seen how "adding the modification of welding" could produce or increase the radial tension as apparently alleged by the Examiner.

In order to produce a radial tension in the metal foil 40' in the modification of FIG. 7 proposed by the Examiner shown in the diagram above, it is submitted that it would be necessary apply a stretching force to the edges of the metal foil 40' before welding the mask 40', the modified mask supporting frame 38, and the clamping member 88 together as proposed by the Examiner. Thus, contrary to the Examiner's allegation that "the basic principle of Martin is maintained in the removal of such elements [i.e., the raised ridge 38 and the raised boss member 98]," it is submitted that the modification of the embodiment in FIG. 7 of Martin proposed by the Examiner would in fact change the principle of the operation of the embodiment in FIG. 7 from producing a radial tension in the metal foil 40' by the clamping action of the clamping member 88 having the raised boss member 98 and the mask supporting frame 34 having the raised ridge 38 to producing a radial tension in the metal foil 40' by applying a stretching force to the edges of the metal foil 40'. Accordingly, it is submitted the Examiner's proposed modification is improper pursuant to MPEP 2143.01(VI) cited on page 20 of the Appeal Brief of August 27, 2007, which now appears on page 2100-141 of the September 2007 revision of the MPEP.

The Examiner continues as follows on page 14 of the Examiner's Answer of December 19, 2007:

At pg. 16 of the Brief, Appellant argues the following:

> [I]t appears that the examiner has proposed that the embodiment in Fig. 7 of Martin be modified as follows. Take the clamping member 88 (corresponding to the cover mask in claim 14) and grind off the raised boss member 98 so that the clamping member 88 has a flat surface.
>
> Neither Examiner nor the disclosure of Martin has ever made any mention of a need to "grind off" any part of the mask assembly of Fig. 7. Appellant appears to be making a very literal interpretation of what is required of the modification of Fig. 7 in order to obtain the structure as claimed. Instead of literally removing the raised boss member by some physical means, the clamping member of Fig. 7 can simply be manufactured without a raised boss member. Similarly, the mask supporting frame can be manufactured without a raised ridge. There is simply no need to manufacture a part of the clamping member or the mask supporting frame that will later be removed.

However, the Examiner has apparently overlooked the fact that the applicant already addressed this issue on pages 16 and 17 of the Appeal Brief of August 27, 2007, where the applicant pointed out that the Examiner has apparently missed the main point of the applicant's arguments, which is that there is simply no suggestion whatsoever in Martin or elsewhere in the prior art to make the extensive modifications to the embodiment in FIG. 7 of Martin that would be required to implement the modification of Martin proposed by the Examiner. This modification would require eliminating the raised boss member 98 of the clamping member 88 so that the clamping member 88 has a flat surface. The applicant's reference to grinding off the raised boss member 98 was merely an example of one way this might be done. The main point of the applicant's arguments is that there is simply no suggestion whatsoever in Martin or elsewhere in the prior art for one of ordinary skill in the art to eliminate the raised boss member 98 of the clamping member 88 so that the clamping member 88 has a flat surface, whether by grinding or by any other method, such as manufacturing the clamping member 88 without the raised boss member 98 as now proposed by the Examiner.

The Examiner continues as follows on page 15 of the Examiner's Answer of December 19, 2007:

> The purpose of the raised boss member and the raised ridge is to provide a radial tension of the metal foil (i.e., the mask) by the clamping action. However, Martin is more concerned with applying substantially uniform tension of the metal foil than he is

> concerned with providing a clamping action (abstract). In the teaching of the embodiment of Fig. 7, Martin explicitly teaches that of importance is that a radial tension can be applied in a number of ways to the metal foil (col. 9, line 65-col. 10, line 2). Thus, Martin suggests that other methods of applying radial tension can be used so long as a tension is applied to the metal foil. In case of removing the raised boss member and the raised ridge such that the clamping function would be lost, the weight of the clamping member, even without the adding the modification of welding, would necessarily provide at least some downward force on the metal foil such that at least some radial tension would be applied to the metal foil. Thus, the basic principle of Martin is maintained in the removal of such elements.

However, as discussed above, since Martin makes the statement "[o]f importance is, that a radial tension can be applied in a number of ways to the substantially metal foil 40' " in column 9, line 65, through column 10, line 2, of Martin referred to by the Examiner as a preface to the detailed discussion of the alternative clamping embodiment in FIG. 7 of Martin, it appears that the "number of ways" referred to by Martin is in fact only two ways—the first way shown in the welding embodiment in FIGS. 1-6, and the second way shown in the clamping embodiment in FIG. 7.

Furthermore, as discussed above in connection with the diagram of the modification of FIG. 7 of Martin proposed by the Examiner, it is submitted that the position taken by the Examiner that "the weight of the clamping member, even without the adding the modification of welding, would necessarily provide at least some downward force on the metal foil such that at least some radial tension would be applied to the metal foil" is contrary to the laws of physics. Nor is it seen how "adding the modification of welding" could produce or increase the radial tension as apparently alleged by the Examiner.

Furthermore, as discussed above, it is submitted that the modification of the embodiment in FIG. 7 of Martin proposed by the Examiner would in fact change the principle of the operation of the embodiment in FIG. 7 from producing a radial tension in the metal foil 40' by the clamping action of the clamping member 88 having the raised boss member 98 and the mask supporting frame 34 having the raised ridge 38 to producing a radial tension in the metal foil 40' by applying a stretching force to the edges of the metal foil 40'. Accordingly, it is submitted the Examiner's proposed modification is improper pursuant to MPEP 2143.01(VI) cited on page 20 of the Appeal

Brief of August 27, 2007, which now appears on page 2100-141 of the September 2007 revision of the MPEP.

Accordingly, for at least the foregoing reasons and the reasons discussed on pages 12-20 of the Appeal Brief of August 27, 2007, it is submitted that Utsugi, Ito, and Martin do not disclose or suggest "a flat mask comprising a flat thin plate in which a predetermined pattern of apertures is formed, the flat mask having a first flat surface extending over an entire area of the flat mask, and a second flat surface extending over the entire area of the flat mask, the second flat surface being separated from the first flat surface by a thickness of the mask; a flat frame supporting the first flat surface of the flat mask so that the flat mask is tensed and the first flat surface remains flat; and a flat cover mask supporting the second flat surface of the flat mask so that the second flat surface remains flat" as recited in claim 14.

Claim 17

It is submitted that Utsugi, Ito, and Martin do not disclose or suggest the feature "wherein the flat mask, the flat frame, and the flat cover mask are held together by welds" recited in dependent claim 17.

The Examiner states as follows on page 15 of the Examiner's Answer of December 19, 2007:

> However, the mere fact that Martin does not include a clamping member 88 if welding is used, and vice versa, does not rise to a level of teaching away because Martin never explicitly excludes the combination of both embodiments nor does he explicitly teach that the combination of both embodiments would render the invention inoperable. Appellant has not cited any statute, rule, procedure, or decision in support of his position.

However, the applicant did in fact cite MPEP 2145(X)(D) in support of his position on page 21 of the Appeal Brief of August 27, 2007. This MPEP section now appears on pages 167 and 168 of the September 2007 revision of the MPEP. In contrast, the Examiner has not cited any statute, rule, procedure, or decision in support of his apparent position that a reference must explicitly exclude a combination of two embodiments, or explicitly teach that the combination of the two embodiments would render the invention inoperable, in order for the reference to teach away from the combination of the two embodiments. There is simply nothing whatsoever in

Martin or elsewhere in the prior art that would have given one of ordinary skill in the art any reason to combine selected elements of Martin's two embodiments to arrive at the hybrid embodiment proposed by the Examiner without using the applicant's disclosure as a road map.

In particular, pursuant to MPEP 2145(X)(D)(2), it is improper to combine references when the references teach away from their combination. *In re Grasselli*, 713. F.2d, 731, 743, 219 USPQ 769, 779 (Fed. Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst.).

Here, the welding embodiment in FIGS. 1-6 of Martin expressly excludes the clamping member 88 of the clamping embodiment in FIG. 7 of Martin because it does not use the clamping member 88, and the clamping embodiment in FIG. 7 of Martin expressly excludes the welding of the welding embodiment in FIGS. 1-6 of Martin because it does not use the welding.

Two functions are performed in each of the two embodiments in FIGS. 1-7 of Martin—stretching the metal foil 40' to apply a radial tension to the metal foil, and mounting the metal foil 40' so that the radial tension will be maintained.

In the welding embodiment in FIGS. 1-6 of Martin, the stretching function is performed by clamping the edges of the metal foil 40' and stretching the metal foil 40' using the clamped edges, and the mounting function is performed by welding the metal foil 40' under tension to the raised ridge 38 of the mask supporting frame 34.

In the clamping embodiment in FIG. 7 of Martin, the stretching function is performed by placing the metal foil 40' on the raised ridge 38 of the mask supporting frame 34, forcing the clamping member 88 having the raised boss member 98 onto the mask supporting frame 34 with the metal foil 40' sandwiched therebetween to stretch the metal foil 40', and the mounting function is performed by holding the edges of the metal foil 40' under tension between the outer support flange 90 of the clamping member 88 and the mask supporting frame 34.

The Examiner continues as follows on page 16 of the Examiner's Answer of December 19, 2007 (emphasis in original):

> However, the above rejection provides motivation to combine two embodiments of Martin. In particular, one of ordinary skill in the art would have realized that the elimination of the raised

> boss member and raised ridge would result in the loss of the fixation means in the metal foil assembly of Fig. 7. Martin teaches in a different embodiment that welding can be used to join different parts of the mask assembly and that welding can be used as a means for affixing the metal foil (col. 8, lines 63-68; column 10, lines 22-32). In view of this teaching, one of ordinary skill in the art would have recognized 1) that the step of welding would supplement for the loss of the function of the raised boss member and the raised ridge and 2) that the addition of a welding step would be able to provide a greater amount of radial tension in the metal foil as compared to the amount of radial tension that can be provided with just the weight of the clamping member. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have omitted the raised boss member and the raised ridge (i.e., such that the metal foil would have a flat surface extending over an entire area of the metal foil) and to have welded the mask assembly of Fig. 7 together with a reasonable expectation of success because one of ordinary skill in the art would have realized that the elimination of such elements would have a subsequent loss of its function and because Martin teaches that welding is an operable method of joining parts of the mask assembly and an operable means for affixing the mask with the desired tension.

With respect to the Examiner's statement that "[i]n particular, one of ordinary skill in the art would have realized that the elimination of the raised boss member and raised ridge would result in the loss of the fixation means in the metal foil assembly of Fig. 7," the problem is that the Examiner has not identified any reason why it would have occurred to one of ordinary skill in the art to delete the raised boss member 98 and the raised ridge 38 in the first place. Thus, the Examiner's position is fatally flawed from the outset.

With respect to the Examiner's statement that "Martin teaches in a different embodiment that welding can be used to join different parts of the mask assembly and that welding can be used as a means for affixing the metal foil (col. 8, lines 63-68; column 10, lines 22-32)," the Examiner has apparently overlooked the fact that Martin discloses using welding only to affix the metal foil 40' to the raised ridge 38 of the mask supporting frame 34 in the welding embodiment in FIGS. 1-6 of Martin. Martin does not disclose using welding to join any other parts of the mask assembly together.

With respect to the Examiner's statement that "the step of welding would supplement for the loss of the function of the raised boss member and the raised ridge," it is submitted that the Examiner's statement is incorrect because the function of the step of welding is to affix the metal

foil 40' to the raised ridge 38 of the mask supporting frame 34 in the welding embodiment in FIGS. 1-7 of Martin to maintain the metal foil 40' under tension after a radial tension already has been established in the metal foil 40' by applying a stretching force to the edges of the metal foil 40' "using known clamping and stretching techniques" (see column 9, lines 61-64, of Martin). In contrast, the function of the raised boss member 98 and the raised ridge 38 in the clamping embodiment in FIG. 7 of Martin is to stretch the metal foil 40' to establish a radial tension in the metal foil 40' and then maintain the metal foil 40' under tension. Thus, the step of welding cannot "supplement for the loss of the function of the raised boss member and the raised ridge" as alleged by the Examiner.

With respect to the Examiner's statement that "the addition of a welding step would be able to provide a greater amount of radial tension in the metal foil as compared to the amount of radial tension that can be provided with just the weight of the clamping member," it is submitted that the welding step cannot provide any radial tension in the metal foil 40' as alleged by the Examiner, but can only maintain a radial tension that has already has been established in the metal foil 40' by applying a stretching force to the edges of the metal foil 40' "using known clamping and stretching techniques." Furthermore, as discussed above in connection with claim 14, it is submitted that the Examiner's position that the weight of the clamping member 88 will provide some radial tension in the metal foil 40' is contrary to the laws of physics.

Since the various statements made by the Examiner in his explanation of why it would have been obvious to modify the embodiment in FIG. 7 of Martin as proposed by the Examiner are incorrect for at least the foregoing reasons, it is submitted that it would not have been obvious to one of ordinary skill in the art at the time of the invention "to have omitted the raised boss member and the raised ridge (i.e., such that the metal foil would have a flat surface extending over an entire area of the metal foil) and to have welded the mask assembly of Fig. 7 together with a reasonable expectation of success because one of ordinary skill in the art would have realized that the elimination of such elements would have a subsequent loss of its function and because Martin teaches that welding is an operable method of joining parts of the mask assembly and an operable means for affixing the mask with the desired tension" as alleged by the Examiner.

Accordingly, for at least the foregoing reasons and the reasons discussed on pages 21-23 of the Appeal Brief of August 27,2007, it is submitted that Utsugi, Ito, and Martin do not

disclose or suggest the feature "wherein the flat mask, the flat frame, and the flat cover mask are held together by welds" recited in claim 17.

Claim 21

The Examiner states as follows on pages 16 and 17 of the Examiner's Answer of December 19, 2007:

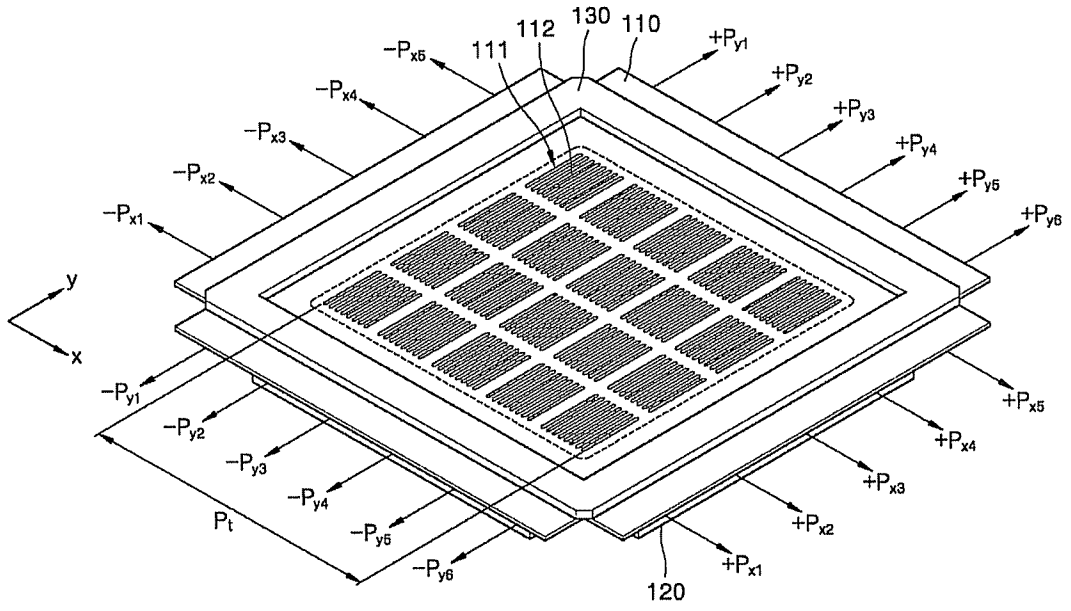
> Appellant argues on pg. 26 of the Brief that Martin's teaching of "substantially uniform tension" of the mask is entirely too generalized to suggest the feature of claim 21 that recites a very specific combination of (1) "different tensions" (2) "at different points" (3) "on each of a plurality of sides of the flat mask". However, Martin's teaching of "substantially uniform tension" would reasonably suggest that the mask is not completely uniform. This slight non-uniformity would necessarily cause different tensions at different points of the mask. Where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971).
>
> The claim is not specific as to a numerical value of the different tensions, and thus the mere teaching that the mask has "substantially uniform tension" is sufficient to meet the limitations of "different tensions at different points on each of a plurality of sides of the flat mask".

However, it is submitted that the Examiner has not identified a valid reason for the U.S. Patent and Trademark Office to believe that the feature "wherein the flat mask is tensed with different tensions at different points on each of a plurality of sides of the flat mask" recited in claim 21 may, in fact, be an inherent characteristic of Martin's mask.

Pursuant to MPEP 2112(IV), the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary

skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy,* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Here is FIG. 6B of the present application, which shows an example of the feature "wherein the flat mask is tensed with different tensions at different points on each of a plurality of sides of the flat mask" recited in claim 21:



Assuming *arguendo* that "Martin's teaching of 'substantially uniform tension' would reasonably suggest that the mask is not completely uniform" as alleged by the Examiner, and that "[t]his slight non-uniformity would necessarily cause different tensions at different points of the mask," as alleged by the Examiner, it is submitted that the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support a determination that this would necessarily cause Martin's mask to have the feature "wherein the flat mask is tensed with different tensions at different points on each of a plurality of sides of the flat mask" recited in

claim 21, such that the Examiner has not established that this feature of claim 21 is an inherent characteristic of Martin's mask under the guidelines set forth in MPEP 2112(IV) cited above, and the decisions cited therein.

Accordingly, for at least the foregoing reasons and the reasons discussed on pages 24-26 of the Appeal Brief of August 27, 2007, it is submitted that Utsugi, Ito, and Martin do not disclose or suggest the feature "wherein the flat mask is tensed with different tensions at different points on each of a plurality of sides of the flat mask" recited in claim 21.

Conclusion—Rejection 2

For at least the foregoing reasons and the reasons discussed on pages 12-26 of the Appeal Brief of August 27, 2007, it is respectfully requested that the rejection of claims 14-17 and 21 (i.e., claims 14, 17, and 21 discussed above and claims 15 and 16 depending from claim 14) under 35 USC 103(a) as being unpatentable over Utsugi in view of Ito and Martin be reversed.

Rejection 3—Claim 15

Notwithstanding the position taken by the Examiner on page 17 of the Examiner's Answer of December 19, 2007, for at least the foregoing reasons and the reasons discussed on pages 26 and 27 of the Appeal Brief of August 27, 2007, it is respectively requested that that the rejection of claim 15 under 35 USC 103(a) as being unpatentable over Utsugi in view of Ito and Martin as applied to claim 14, and further in view of Yamada be reversed.

Rejection 4—Claims 18 and 19

Notwithstanding the position taken by the Examiner on pages 17 and 18 of the Examiner's Answer of December 19, 2007, for at least the foregoing reasons and the reasons discussed on page 27 of the Appeal Brief of August 27, 2007, it is respectfully requested that the rejection of claims 18 and 19 under 35 USC 103(a) as being as being unpatentable over Utsugi in view of Ito and Martin as applied to claim 17, and further in view of Kitazume be reversed.

Rejection 5—Claim 22

On page 18 of the Examiner's Answer of December 19, 2007, the Examiner states as follows:

> Appellant seems to be presenting the argument based on the passage of MPEP 2144.06 that states "equivalency must be recognized in the prior art, and cannot be based on . . . the mere fact that the components at issue are functional equivalents", as cited on pg. 29 of the Brief. However, MPEP 2144.06 also states that "there was evidence that both phthalocyanine and selenium were known photoconductors in the art of electrophotography. 'This, in our view, presents strong evidence of obviousness in substituting one for the other in an electrophotographic environment as a photoconductor.' 209 USPQ at 759.)." The mere knowledge that the two compounds were known to be operable and/or functional equivalents was sufficient evidence of obviousness in substituting one for another.
>
> Accordingly, Martin recognizes that the use of the registration pins 62 and adjusting means 64 is an operable method of aligning a mask to a substrate (col. 9, lines 30-36 and col. 18, line 54-col. 19, line 34; Figs. 1 and 21-23) for a vapor deposition process (col. 1, lines 13-21 and col. 2, lines 54-59), and Fujimori recognizes that a camera and alignment marks 6 on the mask assembly 1 can be used to align a mask to a substrate [0066] for a vapor deposition process [0067]. The alignment marks of Fujimori do not contact a mask 20. With these two teachings, one of ordinary skill in the art at the time that the present application was filed would have acknowledged that the alignment method of Martin and the alignment method of Fujimori were operable equivalents. The teachings of Martin and Fujimori would have presented a recognition of equivalency in the prior art and would have presented strong evidence of obviousness in substituting one method for the other in a process of aligning a mask to a substrate.

The portion of MPEP 2144.06 relied on by the applicant and referred to by the Examiner now appears in MPEP 2144.06(II) on page 2100-153 of the September 2007 revision of the MPEP and reads as follows:

> In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958) (The mere fact that components are claimed as

> members of a Markush group cannot be relied upon to establish the equivalency of these components. However, an applicant's expressed recognition of an art-recognized or obvious equivalent may be used to refute an argument that such equivalency does not exist.)

The portion of MPEP 2144.06 relied on by the Examiner appears in MPEP 2144.06(II), and reads as follows:

> *Smith v. Hayashi*, 209 USPQ 754 (Bd. of Pat. Inter. 1980) (The mere fact that phthalocyanine and selenium function as equivalent photoconductors in the claimed environment was not sufficient to establish that one would have been obvious over the other. However, there was evidence that both phthalocyanine and selenium were known photoconductors in the art of electrophotography. "This, in our view, presents strong evidence of obviousness in substituting one for the other in an electrophotographic environment as a photoconductor." 209 USPQ at 759.).

Smith v. Hayashi is a decision in an interference between Smith's application and Hayashi's patent in which the Board states as follows in pertinent part:

> The Smith et al. disclosure makes it clear that various prior art photoconductors used in electrophotography, including selenium, its alloys, and Pc, may be used in their layer "b." These photoconductor may be in a particulate form dispersed in a binder (note, e.g., page 2, lines 7 et seq.) or (page 19),
>
> > Alternatively, the photoconductive layer may consist entirely of a substantially homogeneous unoriented photoconductive material such as a layer of amorphous [vitreous] selenium, a selenium alloy, or a powdered or sintered photoconductive layer such as cadmium sulfoselenide or phthalocyanine.
> >
> > . . . .
>
> We find nothing in the Hayashi et al. disclosure which could in any way be taken to contradict this disclosure of equivalence; nor have they adduced evidence to establish otherwise. . . . In any event, this in no way detracts from the equivalence set up by the Smith et al. disclosure with respect to the *environment of their claim*, which is the key to the issue here.
>
> Of course, the mere fact that they may be "equivalent" for this particular purpose does not establish in and of itself that one is obvious over the other. In re Ruff, 45 CCPA 1037, 256 F.2d 590, 118 USPQ 340 (1958). However, the disclosure of Smith et al.

> shows that both Pc and selenium are known photoconductors in the art of electrophotography. This, in our view, presents strong evidence of obviousness in substituting one for the other in an electrophotographic environment as a photoconductor.

Thus, the evidence relied on by the Board in *Smith v. Hayashi* was found in a single document, i.e., Smith's disclosure, which indicated that Pc (apparently phthalocyanine) and selenium are equivalents.

In contrast, in the present situation, although Martin and Fujimori each disclose a different method of aligning a substrate to a mask for a vapor deposition process, neither of the two references discloses that the two different methods are equivalents. Accordingly, it is submitted that the Examiner has not identified any evidence whatsoever in Martin and Fujimori or elsewhere in the prior art that establishes that the alleged equivalency between Martin's alignment method and Fujimori's alignment method is recognized in the prior art as required by MPEP 2144.06(II) cited above. Rather, the rejection appears to be based solely on the Examiner's mere opinion that Martin's alignment method and Fujimori's alignment method are functional or mechanical equivalents, which, pursuant to MPEP 2144.06(II) cited above, is not sufficient for the Examiner to rely on equivalence as a rationale supporting the obviousness rejection of claim 22.

For at least the foregoing reasons and the reasons discussed on pages 27-31 of the Appeal Brief of August 27, 2007, it is respectively requested that that the rejection of claim 22 under 35 USC 103(a) as being unpatentable over Utsugi in view of Ito and Martin as applied to claim 14, and further in view of Fujimori be reversed.

Rejection 6—New Ground of Rejection in Examiner's Answer

Claims 14, 15, 17, 18, and 21 have been rejected under 35 USC 103(a) as being unpatentable over Tsuchiya et al. (Tsuchiya) (WO 03/019988 and English translation thereof) in view of Ito.

However, it is submitted that claims 14, 15, 17, 18, and 21 are in fact patentable over Tsuchiya and Ito for at least the following reasons.

The publication date of Tsuchiya is March 6, 2003, which is before the U.S. filing date of November 21, 2003, of the present application, but is after the filing date of November 22, 2002,

of Japanese Patent Application No. 2002-339616, the Japanese priority application of the present application. Accordingly, pursuant to 37 CFR 1.55(a) and MPEP 201.15, submitted herewith is a Submission of English Translation of Priority Document submitting an English translation of Japanese Patent Application No. 2002-339616 filed on November 22, 2002, and a Certification of Translation containing a statement that the English translation is accurate to perfect the applicant's claim for foreign priority under 35 USC 119(a)-(d) and remove the availability of Tsuchiya as a reference against the claims of the present application that are supported by the Japanese priority application as evidenced by the English translation. A certified copy of Japanese Patent Application No. 2002-339616 was filed on November 21, 2003.

It is submitted that the filing of the English translation of the Japanese priority application in response to the Examiner's Answer of December 19, 2007, is timely because the Examiner's Answer of December 19, 2007, is the first paper in which the Examiner cited and relied on Tsuchiya, and 37 CFR 1.55(a)(4)(i)(B) states that "[a]n English translation of a non-English language foreign application is not required except . . . [w]hen necessary to overcome the date of a reference relied on by the examiner." Since the publication date of Tsuchiya is March 6, 2003, the Examiner could have cited and relied on Tsuchiya in the Office Action of January 11, 2006, or the Final Office Action of June 6, 2006, or the Office Action of November 20, 2006, or the Final Office Action of February 27, 2007.

It is submitted that claims 14, 15, 17, 18, and 21 are supported by the Japanese priority application as evidenced by the English translation discussed above, such that Tsuchiya is no longer available as a reference against claims 14, 15, 17, 18, and 21 for the reasons discussed above.

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 14, 15, 17, 18, and 21 under 35 USC 103(a) as being unpatentable over Tsuchiya in view of Ito be reversed.

Rejection 7—New Ground of Rejection in Examiner's Answer

Claim 15 has been rejected under 35 USC 103(a) as being unpatentable over Tsuchiya in view of Ito as applied to claim 14, and further in view of Yamada.

However, it is submitted that claim 15 is in fact patentable over Tsuchiya, Ito, and Yamada for at least the following reasons.

It is submitted that claim 15 is supported by the Japanese priority application as evidenced by the English translation discussed above, such that Tsuchiya is no longer available as a reference against claim 15 for the reasons discussed above.

For at least the foregoing reasons, it is respectfully requested that the rejection of claim 15 under 35 USC 103(a) as being unpatentable over Tsuchiya in view of Ito as applied to claim 14, and further in view of Yamada be reversed.

Rejection 8—New Ground of Rejection in Examiner's Answer

Claims 16 and 22 have been rejected under 35 USC 103(a) as being unpatentable over Tsuchiya in view of Ito as applied to claim 14, and further in view of Martin.

However, it is submitted that claims 16 and 22 are in fact patentable over Tsuchiya, Ito, and Martin for at least the following reasons.

It is submitted that claims 16 and 22 are supported by the Japanese priority application as evidenced by the English translation discussed above, such that Tsuchiya is no longer available as a reference against claims 16 and 22 for the reasons discussed above.

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 16 and 22 under 35 USC 103(a) as being unpatentable over Tsuchiya in view of Ito as applied to claim 14, and further in view of Martin be reversed.

Rejection 9—New Ground of Rejection in Examiner's Answer

Claim 19 has been rejected under 35 USC 103(a) as being unpatentable over Tsuchiya in view of Ito as applied to claim 18, and further in view of Kitazume.

However, it is submitted that claim 19 is in fact patentable over Tsuchiya, Ito, and Kitazume for at least the following reasons.

It is submitted that claim 19 is supported by the Japanese priority application as evidenced by the English translation discussed above, such that Tsuchiya is no longer available as a reference against claim 19 for the reasons discussed above.

For at least the foregoing reasons, it is respectfully requested that the rejection of claim 19 under 35 USC 103(a) as being unpatentable over Tsuchiya in view of Ito as applied to claim 18, and further in view of Kitazume be reversed.

Conclusion—Argument

In view of the law and the facts stated herein and in the Appeal Brief of August 27, 2007, it is submitted that claim 22 does in fact comply with the written description requirement of 35 USC 112, first paragraph; that the various combinations of Utsugi, Ito, Martin, Yamada, Kitazume, and Fujimori relied on by the Examiner do not disclose or suggest all of the features recited in claims 14-19, 21, and 22; and that the various combinations of Tsuchiya, Ito, Yamada, Martin, and Kitazume relied on by the Examiner do not disclose or suggest all of the features recited in claims 14-19, 21, and 22.

Accordingly, it is respectfully requested that that the rejection of claim 22 under 35 USC 112, first paragraph, as failing to comply with the written description requirement, the rejections of claims 14-19, 21, and 22 under 35 USC 103(a) as being unpatentable over the various combinations of Utsugi, Ito, Martin, Yamada, Kitazume, and Fujimori relied on by the Examiner, and the rejections of claims 14-19, 21, and 22 under 35 USC 103(a) as being unpatentable over the various combinations of Tsuchiya, Ito, Yamada, Martin, and Kitazume relied on by the Examiner be reversed.

If there are any additional fees associated with the filing of this paper, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN, MCEWEN & BUI, LLP

Date: 02/14/08

By: _____
Randall S. Svihla
Registration No. 56,273

1400 Eye Street, NW
Suite 300
Washington, DC 20005
Telephone: (202) 216-9505
Facsimile: (202) 216-9510

IX. EVIDENCE APPENDIX (UPDATED)

1. Utsugi et al. (U.S. Patent Application Publication No. 2002/0150674) cited by the Examiner in the Final Office Action of June 6, 2006.

2. Ito et al. (U.S. Patent No. 5,652,067) cited by the Examiner in the Office Action of January 11, 2006, and the Final Office Action of June 6, 2006.

3. Martin (U.S. Patent No. 4,676,193) cited by the Examiner in the Final Office Action of June 6, 2006.

4. Yamada et al. (U.S. Patent Application Publication No. 2001/0019807) cited by the Examiner in the Office Action of January 11, 2006.

5. Kitazume (U.S. Patent Application Publication No. 2002/0025406) cited by the Examiner in the Office Action of January 11, 2006, and the Final Office Action of June 6, 2006.

6. Fujimori et al. (U.S. Patent Application Publication No. 2002/0102754) cited by the Examiner in the Final Office Action of February 27, 2007.

7. Tsuchiya et al. (WO 03/019988) cited by the Examiner in the Examiner's Answer of December 19, 2007.

8. English translation of Tsuchiya et al. (WO 03/019988) prepared by FLS, Inc., December 2007, cited by the Examiner in the Examiner's Answer of December 19, 2007.

9. English translation of Japanese Patent Application No. 2002-339616 filed on November 22, 2002, the Japanese priority application of the present application, and a Certification of Translation containing a statement that the English translation is accurate, both filed with this Reply Brief on February 14, 2008, to perfect the applicant's claim for foreign priority under 35 USC 119(a)-(d).